

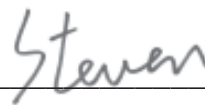
SERVICE MANUAL

Model Name : EP910

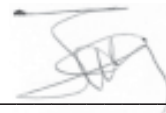
Prepared by SI :



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Check by :



Approved by :



Date	Revise Version	Description
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Preface

This manual is applied to EP910 0.95" DDR DMD SXGA+ micro portable projection system. The manual gives you a brief description of basic technical information to help in service and maintaining the product.

Your customers will appreciate the quick response time when you immediately identify problems that occur with our products. We expect your customers will appreciate the service that you offer them.

This manual is for technicians and people who have an electronic background. Send the product back to the distributor for repairing and do not attempt to do anything that is complex or is not mentioned in the troubleshooting.

NOTICE :

The information found in this manual is subject to change without prior notice. Any subsequent changes made to the data herein will be incorporated in further edition.

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Introduction

1-1 Highlight

No	Item	Description
1	Dimensions (L * W* H)	<ul style="list-style-type: none">- Internal: 406* 306* 112- External: 411* 311* 116
2	Weight	<ul style="list-style-type: none">- Approx. 10lbs.
3	Cooling System	<ul style="list-style-type: none">- Advanced air flow- One fan/ two blowers with low system acoustic noise level- Temperature control circuits with adaptive voltage control fan speed- Max touch temperature follows UL60950 regulation
4	Conbinet	<ul style="list-style-type: none">- Provides space for PCB boards, fan, optical engine, power supply, UHP Lamp
5	Top Side	<ul style="list-style-type: none">- Projection Lens Zoom Ring/ Focus Ring/ Lens Rim- One IR receiver window- Seven keypad keys (w/ blue back-light)- Three LEDs (Lamp, Temp, Power)- Two elevator buttons
6	Rear Side	<ul style="list-style-type: none">- One D-sub 15-pin female connector for 2nd analog RGB input, and component video/ HDTV input- One D-sub 15-pin female connector for VGA out- One RJ45 connector for networking- one RCA Jack for Composite Video input- One D-sub 9-pin RS232 port for projector control- One IR receiver window- One set of RCA connectors (RGB) for Component video/ HDTV input- Two phone jack for audio out (Cyan)
7	Bottom	<ul style="list-style-type: none">- Spec. and PPID labels- Two elevator foot- Two adjustor foot- One lamp cover- Four-inlet vent- Three M4 holes for ceiling mount- Three M3 mounting holes for Navitar add-on lens

No	Item	Description
8	Right Side	- Outlet vent
9	Left Side	- One speaker hole - Inlet vent
10	Lamp Housing	- Lamp could be changed by customer, but should follow the instructions as indicated in the user's manual - Replaceable Lamp should be provided by Coretronic or its authorized agency.
11	Tilt Angle	- Degree: +5/-2 with elevator mechanism
12	Keystone correction	- Degree: +/- 16 degrees (max.) for horizontal and vertical keystone correction. Note: the maximum degrees for both V. and H. keystone correction are dependent to each other and also the resolution of input source.
13	Color	- Top cover: Pantone 877C (Glossy) - Bottom Base: Pantone Cool Gray 9C (Glossy) - Side/ Back covers: Pantone Cool Gray 1C - Lens rim/ Zoom ring/ Focus ring: Pantone 8483C (metallic) - Keypad: Pantone 877C (Glossy)
14	Materials	- PC + ABS
15	Lamp Door Protection	- Lamp power supply shut off automatically when door open
16	Power Supply	- Universal AC 90-240V; 50/ 60Hz with PFC input - Philips 300W 1.3 AC UHP Lamp E21.8 - Variant fan speed control (Depending on temperature variance)
17	Terminals	- VGA input: Female, D-sub 15 pins - 2nd analog RGB Computer input (DVI-I Analog) - VGA Output: Female, D-sub 15 pins - 3 HDTV/ Component video input ports (standard component RCA Jack) - Composite Video input (RCA jack* 1) - S-Video input (Mini Din 4-pin* 1) - One RJ45 connector for Networking - One USB connector for firmware upgrade and diagnostics/ IR mouse control - One RS232 port for wired projector control - Audio input: Phone jack* 2, RCA* 2 - Audio Output: Phone jack* 1

No	Item	Description
18	Input Signal Spec.	<ul style="list-style-type: none"> - Analog: H-sync Frequency 15kHz ~ 100kHz V-sync Frequency 43Hz ~ 120Hz - Digital: H-sync Frequency 30kHz ~ 64kHz V-sync Frequency 56Hz ~ 85Hz - Video Signal RGB (PC) Analog RGB 0.7Vp-p, 75 ohm Analog RGB 1Vp-p, 75 ohm, Sync. signal Separate TTL H, V Sync. Composite TTL Sync. - Video Composite video 1Vp-p, 75 ohm S-video Luminance 0.714Vp-p, 75 ohm Chrominance 0.286Vp-p, 75 ohm
19	System Controller	- Pixelworks PW388B-20 (10bit)
20	Projection Lens	<ul style="list-style-type: none"> - F/ 2.6 ~ 2.82, f= 39.12 ~ 46.94mm. 1.2X Zoomed Focal Lens - Throw Ratio= 2.0 ~ 2.4:1
21	Throw Distance	- 1.5m ~10m
22	Brightness	<ul style="list-style-type: none"> - 3000 ANSI Lumens (Max.) - 2700 ANSI Lumens (Typical) - 2400 ANSI Lumens (Minimum)
23	Contrast	<ul style="list-style-type: none"> - 2000:1 Typical (Full white and black) - 1500:1 Minimum (Full white and black)
24	Uniformity	<ul style="list-style-type: none"> - 78% Typical (Japan standard) - 60% Minimum (Japan standard)
25	Temperature	<ul style="list-style-type: none"> - Operating: 5 ~ 35°C - Storage: -20 ~ 60°C
26	Maximum Humidity	<ul style="list-style-type: none"> - Operating: 5 ~35°C, 80%RH (Max.) non- condensing - Storage: -20 ~ 60°C, 80%RH (Max.) non-condensing
27	Lamp Life	- 1500 hours typical, 50% survival rate (2000 hours in Eco mode)
28	Altitude	<ul style="list-style-type: none"> - Operating: 0 ~ 2500 ft 5 ~ 35°C/ 2500 ~ 5000 ft 5 ~ 30°C/ 5000 ~ 10000 ft 5 ~ 25°C - Storage: 40000 ft

1-2 Compatible Mode

Analog




Standard	Resolution	Vertical Refresh (Hz)	Horizontal Scan (KHz)
VGA	640 x 350	70	31.5
	640 x 350	85	37.9
	640 x 400	85	37.9
	640 x 480	60	31.5
	640 x 480	72	37.9
	640 x 480	75	37.5
	640 x 480	85	43.3
	720 x 400	70	31.5
	720 x 400	85	37.9
SVGA	800 x 600	56	35.2
	800 x 600	60	37.9
	800 x 600	72	48.1
	800 x 600	75	46.9
	800 x 600	85	53.7
XGA	1024 x 768	43.4	35.5
	1024 x 768	60	48.4
	1024 x 768	70	56.5
	1024 x 768	75	60.0
	1024 x 768	85	68.7
SXGA	1280 x 1024	60	63.98
	1280 x 1024	75	79.98
	1280 x 1024	85	91.1
SXGA +	1400 x 1050	60	63.98
UXGA	1600 x 1200	60	75.0
MAC LC 13"	640 x 480	66.66	34.98
MAC II 13"	640 x 480	66.68	35
MAC 16"	832 x 624	74.55	49.725
MAC 19"	1024 x 768	75	60.24
MAC	1152 x 870	75.06	68.68
MAC G4	640 x 480	60	31.35
MAC G4	640 x 480	120	68.03
MAC G4	1024 x 768	120	97.09
I Mac DV	640 x 480	117	60
I Mac DV	800 x 600	95	60
I Mac DV	1024 x 768	75	60
I Mac DV	1152 x 870	75	68.49
I Mac DV	1280 x 960	75	75
I Mac DV	1280 x 1024	85	91.1

Digital





Standard	Resolution	Vertical Refresh (Hz)	Horizontal Scan (KHz)
VGA	640 x 350	70	31.5
	640 x 350	85	37.9
	640 x 400	85	37.9
	640 x 480	60	31.5
	640 x 480	72	37.9
	640 x 480	75	37.5
	640 x 480	85	43.3
	720 x 400	70	31.5
	720 x 400	85	37.9
SVGA	800 x 600	56	35.2
	800 x 600	60	37.9
	800 x 600	72	48.1
	800 x 600	75	46.9
	800 x 600	85	53.7
XGA	1024 x 768	60	48.4
	1024 x 768	70	56.5
	1024 x 768	75	60.0
SXGA	1280 x 1024	60	63.98
	1280 x 1024	75	79.98
	1280 x 1024	85	91.1
	1400 x 1050	60	63.98
UXGA	1600 x 1200	60	75.0

Disassembly Process





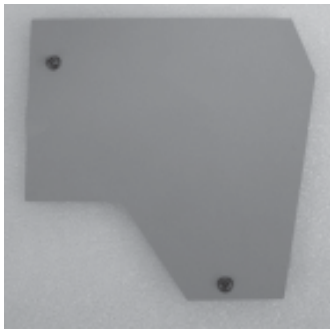
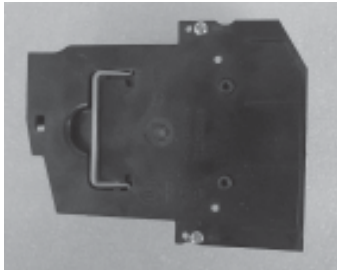
2-1 Equipment Needed

Item	Photo	Item	Photo
Philips: 107		Hex Sleeves 5mm	
Philips: 101			


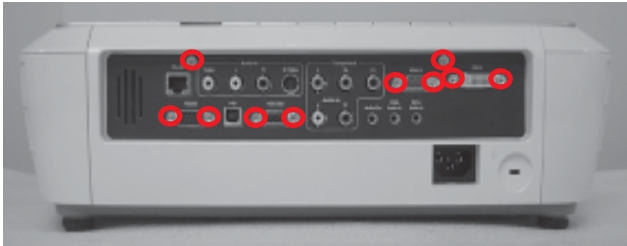

2-2 Appearance

Item	Photo	Item	Photo
Front Side		Rear Side	
Top Side		Bottom Side	

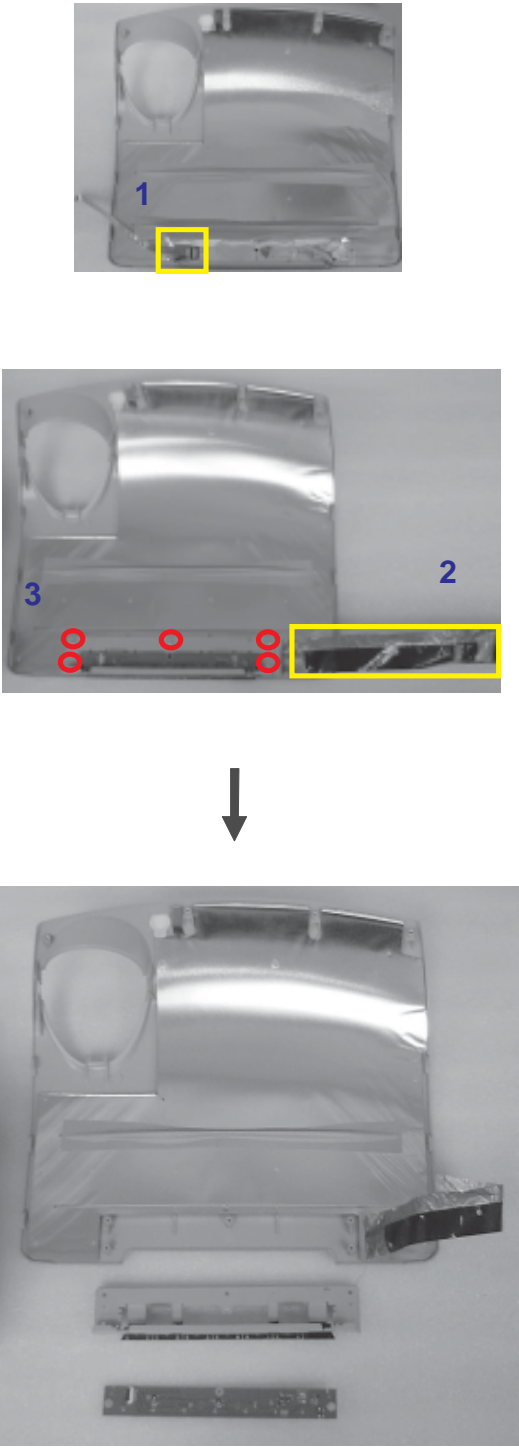
2-3 Disassemble Lamp Cover and Lamp

No	Procedure	Photo
1	<ol style="list-style-type: none">1. Unscrew 2 screws to remove the Lamp Cover (as red circle)2. Pull up the Lamp Cover Modules	      <p>Lamp Cover</p> <p>Lamp</p>

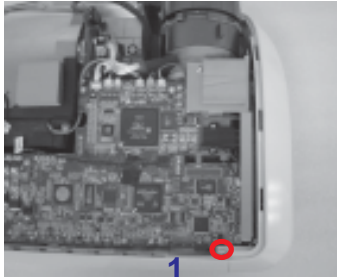
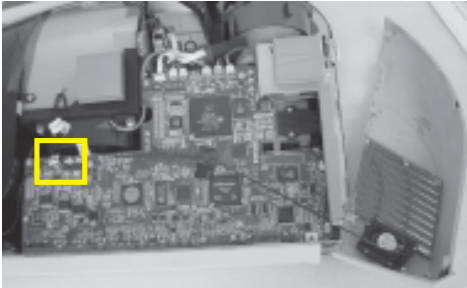





2-4 Disassemble Top Cover

No	Procedure	Photo
1	<ol style="list-style-type: none">1. Unscrew 12 screws from the Bottom Cover (as red circle)2. Unscrew 10 screws from the Rear Cover (as red circle)3. Push forward to remove the Top Cover	<p>1</p>  <p>2</p>  <p>↓</p> 

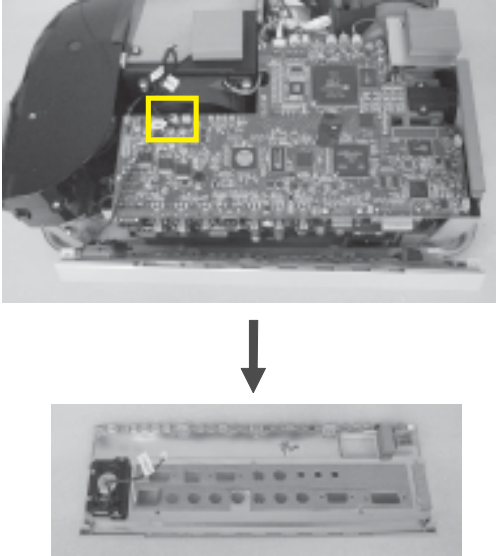
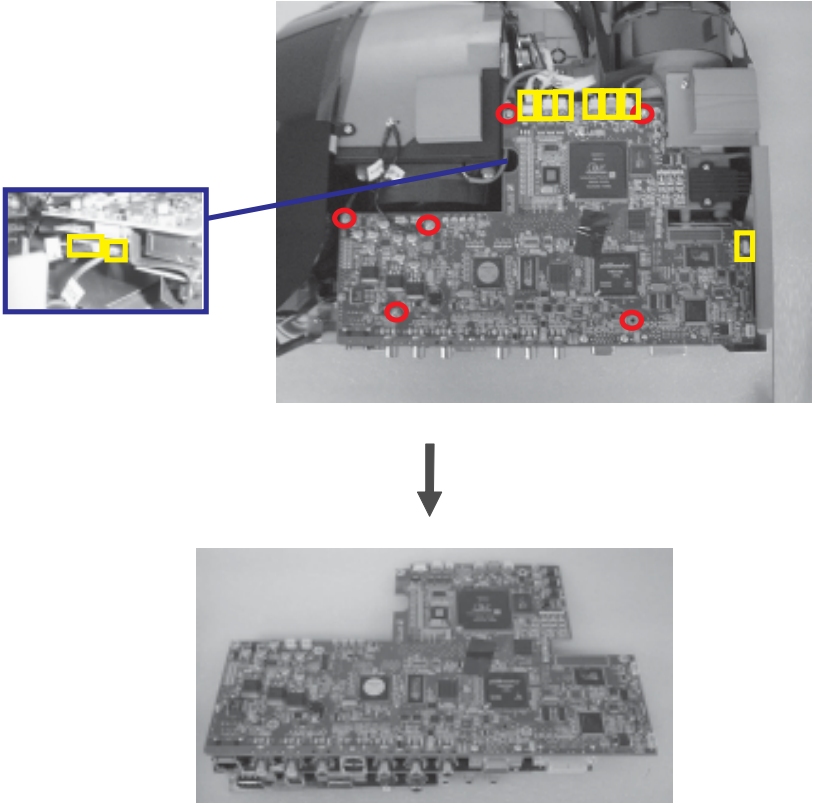
2-5 Disassemble Keypad Board

No	Procedure	Photo
1	<ol style="list-style-type: none"> 1. Unplug 1 wire (as yellow square) 2. Take off EMI type (as yellow square) 3. Unscrew 5 screws (as red circle) 4. Remove the Keypad Board <p>Note: EMI type can be recycled</p>	 <p>The photo sequence illustrates the disassembly process in three steps:</p> <ul style="list-style-type: none"> Step 1: A yellow square highlights a wire connector on the keypad board. Step 2: A yellow square highlights the EMI type, and five red circles highlight screws. Step 3: The keypad board is shown removed from the device, with the EMI type and screws also shown separately.

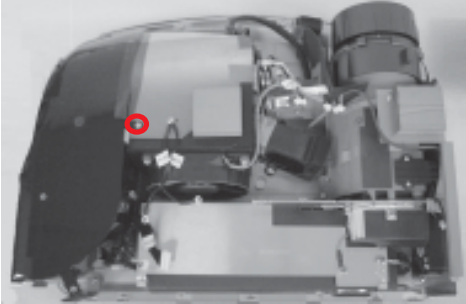


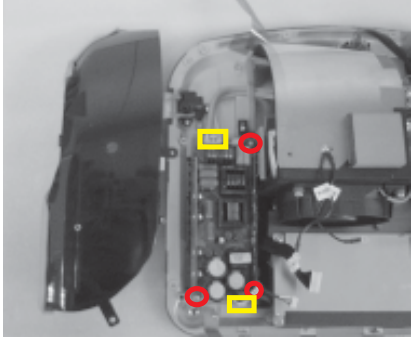

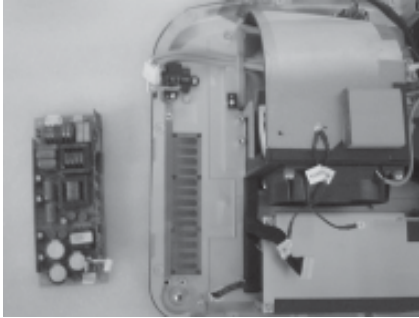
2-6 Disassemble Vent

No	Procedure	Photo
1	<p>Left Vent:</p> <ol style="list-style-type: none"> 1. Unscrew 1 screw (as red circle) 2. Unplug 1 wire (as yellow square) 3. Remove the Left Vent 	    <p>Left Vent</p>
2	<p>Right Vent:</p> <ol style="list-style-type: none"> 1. Unscrew 2 screws (as red circle) 2. Remove the Right Vent 	   <p>Right Vent</p>

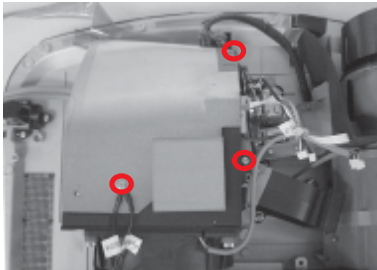


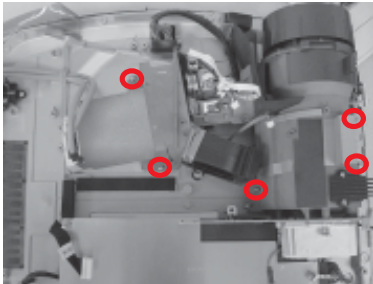

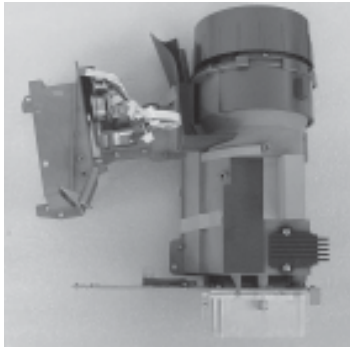
2-7 Disassemble Rear Cover and Main Board

No	Procedure	Photo
1	<p>Rear Cover:</p> <ol style="list-style-type: none"> 1. Unplug 1 wire (as yellow square) 2. Remove the Rear Cover 	 <p>Rear Cover</p>
2	<p>Main Board:</p> <ol style="list-style-type: none"> 1. Unscrew 6 screws (as red circle) 2. Unplug 9 wires (as yellow square) 3. Remove the Main Board 	 <p>Main Board</p>

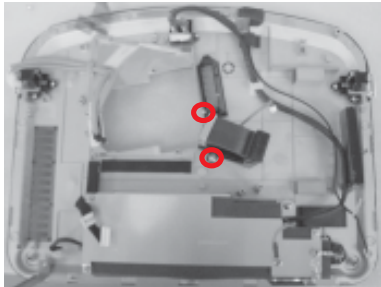
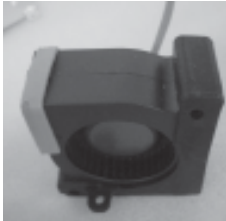
2-8 Disassemble Ballast

No	Procedure	Photo
1	1. Unscrew 1 screw (as red circle) to remove the Air-Duct first	   Air-Duct
2	1. Unscrew 3 screws (as red circle) 2. Unplug 2 plugs (as yellow square) 3. Remove the Ballast	  

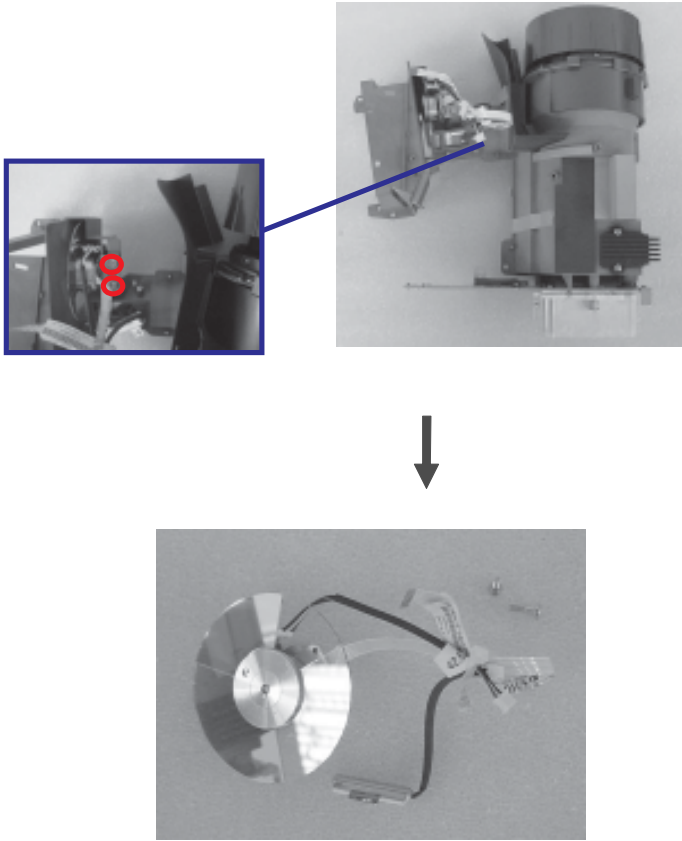
2-9 Disassemble Optical Module

No	Procedure	Photo
1	<ol style="list-style-type: none">1. Unscrew 3 screws (as red circle)2. Pull up to remove the Metal Cover	  
2	<ol style="list-style-type: none">1. Unscrew 5 screws (as red circle)2. Lift up the Optical Module <p>Note: Avoid to touch the Optical glass part</p>	  

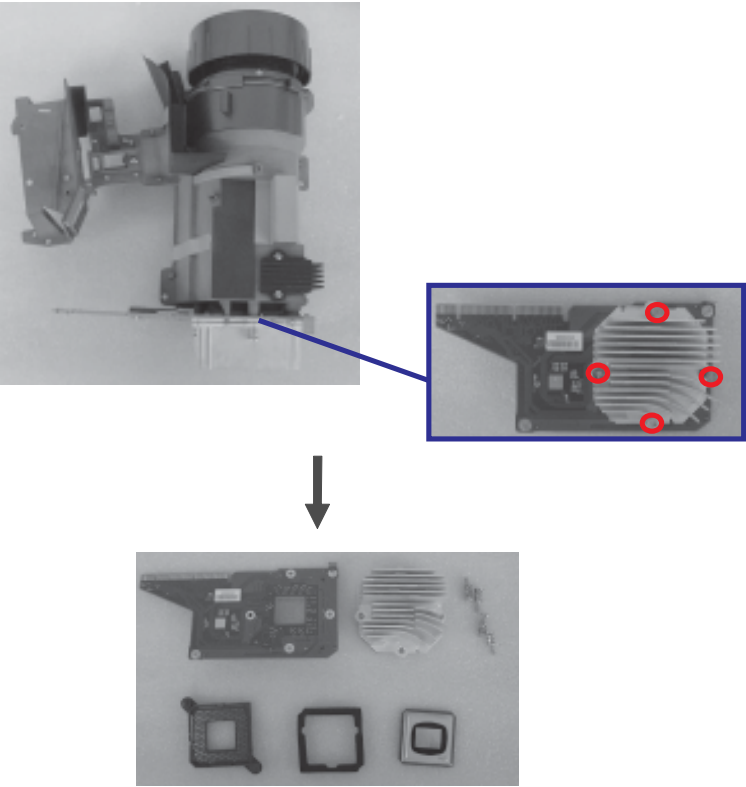
2-10 Disassemble Fan

No	Procedure	Photo
1	<ol style="list-style-type: none">1. Unscrew 2 screws (as red circle)2. Remove the Fan	 

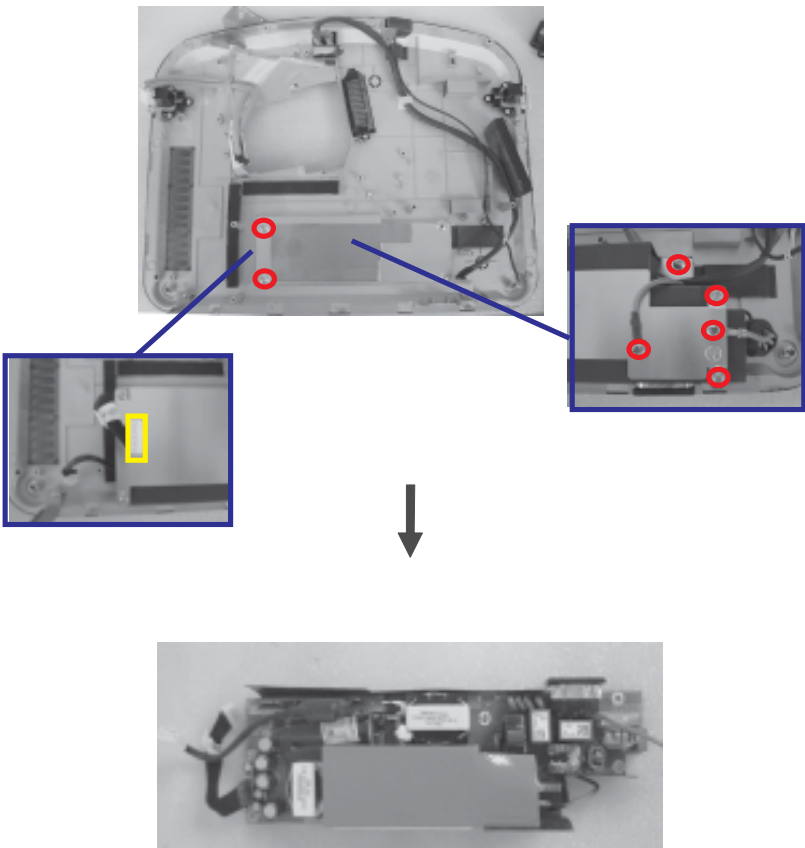
2-11 Disassemble Color Wheel

No	Procedure	Photo
1	<p>1. Unscrew 2 screws (as red circle)</p> <p>2. Remove the Color Wheel</p> <p>Note: Avoid to touch the glass parts in Color Wheel.</p>	

2-12 Disassemble DMD Chip

No	Procedure	Photo
1	<ol style="list-style-type: none">1. Unscrew 4 screws (as red circle)2. Remove the DMD Chip	

2-13 Disassemble LVPS

No	Procedure	Photo
1	<ol style="list-style-type: none">1. Unscrew 7 screws (as red circle)2. Unplug 1 wire (as yellow square)3. Lift up the LVPS	

Troubleshooting

3-1 Equipment Needed

- PC or Pattern Generator
- DVD Player (Video, S-Video, Audio)
- Quantum Data 802B or CHROMA 2327

3-2 Main Procedure

No	Symptom	Procedure
1	No Power	<ul style="list-style-type: none">- Ensure the Power Cord and AC Power Outlet are securely connected- Check Lamp Cover and Interrupt Switch- Ensure all connectors are securely connected and aren't broken- Check DC-DC- Check Ballast- Check Main Board
2	Auto Shut Down	<ul style="list-style-type: none">- Check LED Status<ul style="list-style-type: none">a. Lamp LED Light<ul style="list-style-type: none">- Check Lamp- Check Lamp Driver- Check Main Boardb. Temp LED Light<ul style="list-style-type: none">- Check Thermal Sensor- Check Thermal Switch- Check Fanc. Color Wheel<ul style="list-style-type: none">- Check Color Wheel- Check Photo Sensor
3	No Image	<ul style="list-style-type: none">- Ensure the Signal Cable and Source work (If you connect multiple sources at the same time, use the "Source" button on the control panel to switch)- Ensure all connectors are securely connected and aren't broken- Check Main Board- Check DMD Board- Check Color Wheel- Check DMD Chip- Check Engine Module
4	No Light On	<ul style="list-style-type: none">- Ensure all connectors are securely connected and aren't broken- Check Lamp Module- Check DC-DC- Check Ballast- Check Main Board
5	Mechanical Noise	<ul style="list-style-type: none">- Check Color Wheel- Check Fan Module

No	Symptom	Procedure
6	Line Bar / Line Defect	<ul style="list-style-type: none"> - Check if the DMD Chip and the DMD Board are assembled properly - Check DMD Board - Check DMD Chip - Check Main Board
7	Image Flicker	<ul style="list-style-type: none"> - Do "Reset" of the OSD Menu - Ensure the Signal Cable and Source work - Check Lamp Module - Check Color Wheel - Check DMD Board - Check Main Board
8	Color Abnormal	<ul style="list-style-type: none"> - Do "Reset" of the OSD Menu - Adjust Color Wheel Index - Check Main Board - Check DMD Board - Check Color Wheel
9	Poor Uniformity / Shadow	<ul style="list-style-type: none"> - Ensure the Projection Screen without dirt - Ensure the Projection Lens is clean - Ensure the Brightness is within spec. (Replace the Lamp if the Brightness is less than spec.) - Check Engine Module
10	Dead Pixel / Dust (Out of spec.)	<ul style="list-style-type: none"> - Ensure the Projection Screen without dirt - Ensure the Projection Lens is clean - Clean DMD Chip and Engine Module - Check DMD Chip - Check Engine Module
11	Garbage Image	<ul style="list-style-type: none"> - Ensure the Signal Cable and Source work - Check Main Board - Check DMD Board
12	Remote Controll or Control Panel Failed	<ul style="list-style-type: none"> - Remote Control <ul style="list-style-type: none"> a. Check Battery b. Check Remote Control c. IR Receiver - Control Panel <ul style="list-style-type: none"> a. Check FPC b. Check Keypad c. Check Main Board
13	Function Abnormal	<ul style="list-style-type: none"> - Do "Reset" of the OSD Menu - Check Main Board - Check DMD Board

Function Test & Alignment Procedure

4-1 Test Equipment Needed

- IBM PC with UXGA resolution (Color Video Signal & Pattern Generator)
- DVD player with Multi-system (NTSC/PAL/SECAM)
- HDTV Tuner or Source (480i, 576i/P, 720p, 1080i/P), equipped with "S-Video", "Component", "Composite" interface.
- Minolta CL-100
- Quantum Data 802B or CHROMA2327
- After changing parts, check the information below.

Charge Parts/Update	Version Update	Color Wheel Index	ADC Calibration	Video Calibration	Reset Lamp Use Time	Factory Reset	EDID
M/B	v	v	v	v		v	v
FW	v	v	v	v		v	
Color Wheel		v					
Lamp Module					v		

4-2 Service Mode


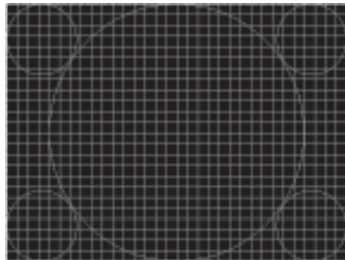



No	Item	Step
1	Service Mode	1. Turn on the projector. 2. Press "Power" + "Menu" + "Right" + "Right" + "Menu" + "Right" to enter the Service Mode.

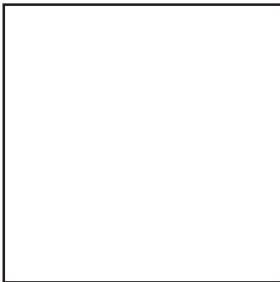

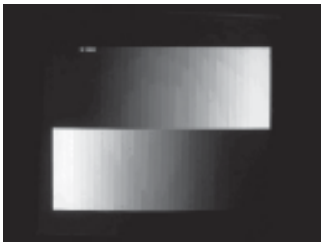
4-3 Test Condition



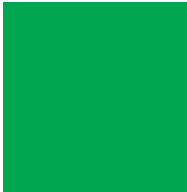

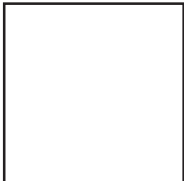





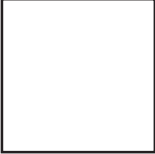
- Circumstance Brightness : Dark room less than 2.5 lux.
- Inspection Distance : 1.5m~3m for functional inspection
- Screen Size : 60 inches diagonal (wide)
- After repairing each EP910, the unit should be burn-in (Refer to the table below).

Symptom	Burn-in Time
Normal Repair	2 Hours
NFF	4 Hours
Auto Shutdown	6 Hours

4-4 Inspection Procedure

No	Step	Specification	Procedure	Photo
1	Frequency and Tracking	Eliminate visual wavy noise by Rsync, Frequency or Tracking selection.	<ul style="list-style-type: none"> - Test Signal : 1600x1200@60Hz - Test Pattern : Line Moire Pattern - check and see if image sharpness and focus are well-performed. - If not, re-adjust by the following steps: <ol style="list-style-type: none"> (1) Select "Frequency" function to adjust the total pixel number of pixel clock in one line period. (2) Then, select "Tracking" function and use right or left arrow key to adjust the vgalue to minimize video flicker. 	
2	Boundary	Horz. And Vert. position of video should be adjustable to be the screen frame.	<ul style="list-style-type: none"> - Test Signal : 1600x1200@60Hz - Test Pattern : Boundary Frame - Adjust Resync or Frequency / Tracking / H. Position / V. Position to the inner of the screen. 	
3	Focus	The text in the corner should be clear after adjust the focus ring.	<ul style="list-style-type: none"> - Test Signal : 1600x1200@60Hz - Test Pattern : Text Pattern - Adjust the center clearly; meanwhile, one slightly vague corner in the image is allowed. 	
4	HDTV	No discolor	<ul style="list-style-type: none"> - Test Signal : 480i/P, 576i/P, 720P, 1080i/P - Test Pattern : Color Bar - Equipment: Quantum Data 802B or CHROMA2327 <p><i>*Please refer to page 4~7 to enter Service Mode. Use 480i signal, color bar pattern to do video calibration; then, use 576p signal by 4:3 screen and 1080i signal by 16:9 screen. If the test result was in discoloration or flickering, please return the unit back to the repair center.</i></p>	
5	Color Performance		<ul style="list-style-type: none"> - Test Signal : 1600x1200@60Hz - Test Pattern : 64 RGBW Scale Pattern & Gray 16 Pattern - Please check and ensure if each color is normal and distinguishable. - If not, please adjust color index of the Engineering Mode. 	

No	Step	Specification	Procedure	Photo
6	Screen Uniformity	Should be compliant with 60%.(Minimum)	<ul style="list-style-type: none"> - Test Signal : 1600x1200@60Hz - Test Pattern : Full White Pattern & Full Black Pattern - Please check and ensure the unit is under the spec. - Please check and see if it's in normal condition. - If not, please return the unit to repair area. *Please check and see if there are dead pixels on DMD Chip. - The total number and distance of dead pixels should be compliant with the spec. <p>Note:</p> <p>(1) Bright Pixel: Test Pattern: Full Black Pattern</p> <ul style="list-style-type: none"> - Please check and ensure that the unit cannot accept any bright pixel. - If not, please return the unit to repair area. <p>(2) Dark Pixel: Test Pattern: Full White Pattern</p> <ul style="list-style-type: none"> - Please check and ensure that the pixel number should be smaller or amount to 5 pixels. - If not, please return the unit to repair area. 	
7	Light Leak	The unit can't accept the leakage is brighter than Gray 10 pattern	<ul style="list-style-type: none"> - Test Signal : 1600x1200@60Hz - Test Pattern : Gray 10 Pattern - Please check and see if the light leaks *Note - The unit cannot accept the leakage is brighter than Gray 10 Pattern <p>Note: Light leak on reflective edge, eyecatcher, bond wires and exposed metal.</p>	
8	Calibration	Calibration Pattern should be in full screen mode	<ul style="list-style-type: none"> - Once Main Board is changed, firmware upgrade, Video Calibration & ADC Calibration should be done as well. - Video Calibration - Test Signal : 1600x1200@60Hz - Test Pattern : Gray 10 Pattern (Figure 6) - ADC Calibration (PC Calibration) - Test Signal : 1600x1200@60Hz - Test Pattern : Calibration Pattern (Figure 7) <p>Note:</p> <ol style="list-style-type: none"> 1. Calibration Pattern should be in Full Screen Mode. 2. Please refer to 4-6. Guide to Entering Service Mode and Factory Reset for entering Service Mode. 3. Choose and access Video Calibration & ADC Calibration for correction in Service Mode. Choose "Exit" to leave the Service Mode after all. 	

No	Step	Specification	Procedure	Photo
9	Contrast/Brightness	Gray level should be distinguishable and without color abnormal.	- Test Pattern : 64 RGBW scale	
10	R, G, B and White Color Performance	Each R, G, B color should be normal without color abnormal issue.	- Test Pattern : R, G, B and White Color	   
11	Dead Pixel (Bright pixel)	Cannot accept any bright pixel	- Test Pattern : Full Black	
	Dead Pixel (Dark pixel)	The numbers of dead pixel should be smaller or amount to 6 pixel.	- Test Pattern : Full White	
12	Blemish (Bright)	The bright blemish cannot be accepted if the problem appear with Gary 30 pattern	- Test Pattern : Full Black / Gray 30	 
13	Blemish (Dark)	The dark blemish cannot be accepted if the problem appear with Blue 60 pattern.	- Test Pattern : Full white / Blue 60	 

Firmware Upgrade Procedure

5-1 Main Board- Equipment Needed

Software


- Appcode.HEX
- Flasher.HEX
- Flashall.inf
- FlashUpgrader.exe

Hardware


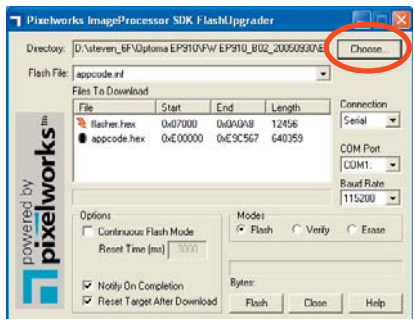

- EP910
- PC
- RS 232 9 pin cable (Male to Female) pin to pin
- Power Cord

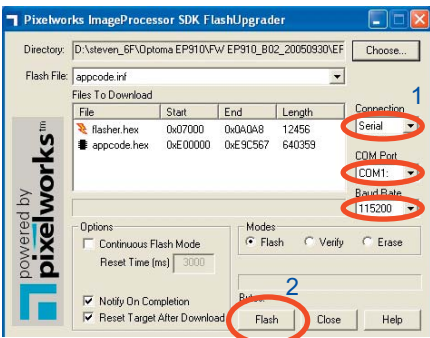
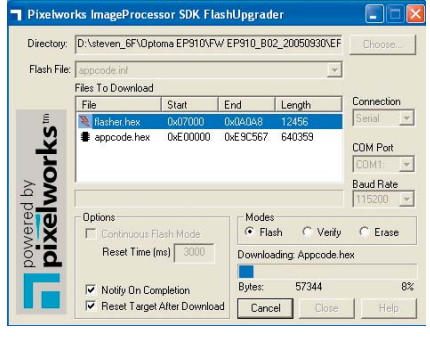
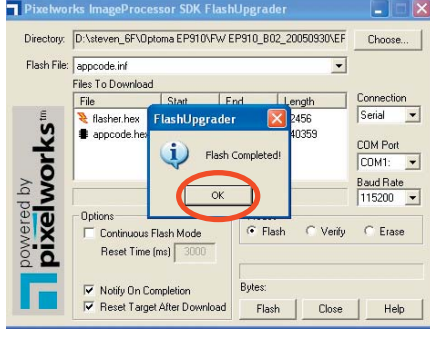
Item	Photo	Item	Photo
EP910 Projector		RS-232 Cable (M to F)	
PC		Power Cord	

5-2 Setup Procedure

No	Step	Procedure	Photo
1	Connect All Ports	<p>1. Make sure power cord unplug.</p> <p>2. Connect PC Com Port and RS232 Port by RS232 cable.</p>	 <p>Com Port</p>

5-3 Firmware Upgrade Procedure

No	Step	Procedure	Photo
1	Enter into the "In System Program"	Execute "FlashUpgrader.exe".	
2	Firmware Upgrade	The window of FlashUpgrader shows up and click "Choose" to get the file directory.	
3	Process	Select "appcode.inf" file and open it.	

	Step	Procedure	Photo
4	Process	<p>1. Select the serial port which is connected to EP910. Don't use other baud rate than 115200, or the program may not work.</p> <p>2. Click "Flash".</p>	
5	Process	Connect Power Cord to EP910, then do the upgrade process after. Program will be auto run after 5 sec.	
6	Finish	Press "Ok", then close FlashUpgrader program and unplug Power Cord to finish firmware upgrade.	



5-4 Network- Equipment Needed

Software


- Microsoft Windows 98/NT/2000/XP
- SE9001-14A_A01-2.Bin

Hardware

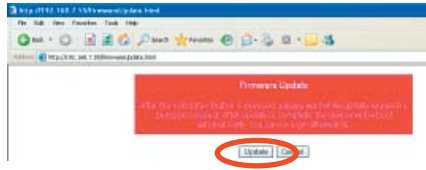
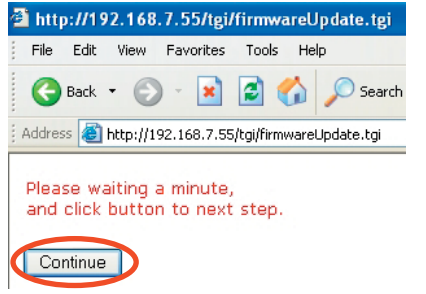
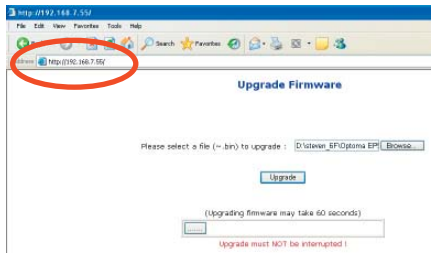

- EP910
- PC/ Laptop (the minimum CPU requirement is Pentium III 800)
- Network line
- Fix IP address

Item	Photo
PC or Laptop	
EP910 projector	

5-5 Setup Procedure

No	Step	Procedure	Photo
1	Connect All Ports and Setup	<div>1. PC and EP910 need to be connected to RJ45 port individually.</div> <div>2. Turn on EP910 and PC.</div>	

5-6 Firmware Upgrade Procedure

No	Step	Procedure	Photo
1	Firmware Upgrade	<p>1. Open the Browser, like IE.</p> <p>2. Key in http://EP910 ip address/firmwareUpdate.html. Exp: EP910 ip address is 192.168.7.55</p> <p>3. Press "Update" to continue.</p> <p>Note: Item 2: FirmwareUpdate: "U" needs to capitalize.</p>	
2	Process	Press "Continue" for firmware upgrading process.	
3	Process	Browse the file to find the firmware.	
4	Finish	<p>1. Wait for a minute, then click for the next step.</p> <p>2. Press "Re Login" to finish upgrading.</p>	

EDID Key-in Procedure

Extended Display Identification Data is a VESA standard data format that contains basic information about a display device and its capabilities, including vendor information, maximum image size, color characteristics, factory pre-set timings, frequency range limits, and character strings for the EP910 and serial number.

The information is stored in the display and is used to communicate with the system through a Display Data Channel (DDC), which sits between the display device and the PC graphics adapter. The system uses this information for configuration purposes, so the EP910 and system can work together.

Note: If a display device has digital input ports, like DVI or HDMI, but without EDID in its main board, the display device will show no image while the input source is digital signal.





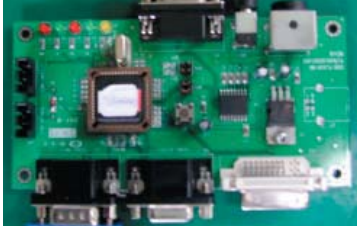



6-1 Equipment Needed

Software

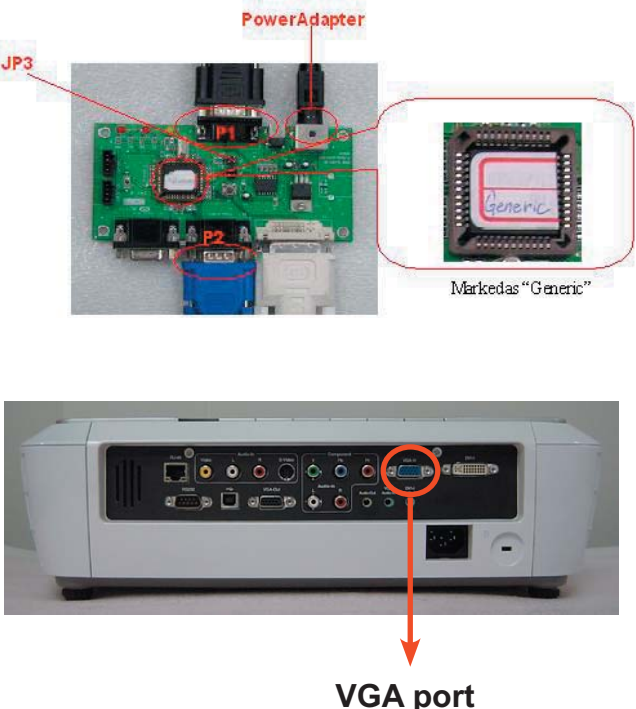
- EDID.exe
- EP910-EDID-A02.ini

Hardware


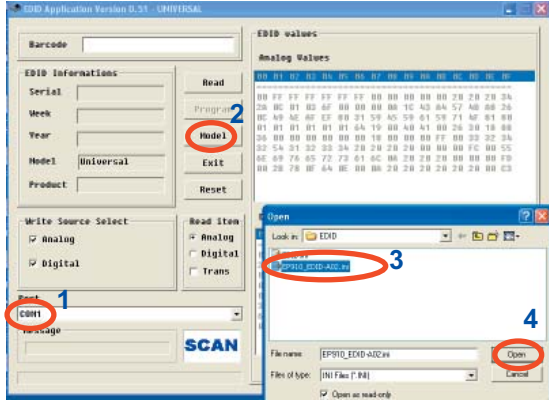
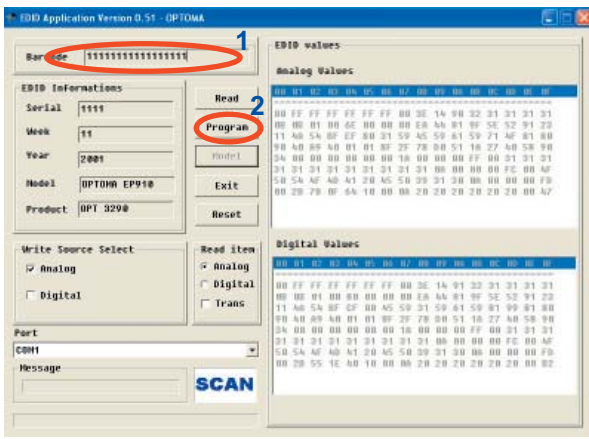
- EP910
- PC
- RS 232 9 pin cable (Male to Female) pin to pin
- Power Cord for EP910
- VGA Cable
- DVI Cable
- EDID Fixture (JP3 must be closed)
- Power Adapter for Fixture and Power Cord

Item	Photo	Item	Photo
EP910 Projector		RS-232 Cable (F to M)	
PC		VGA Cable	
EDID Fixture		DVI Cable	
Power Adapter		Power Cord	

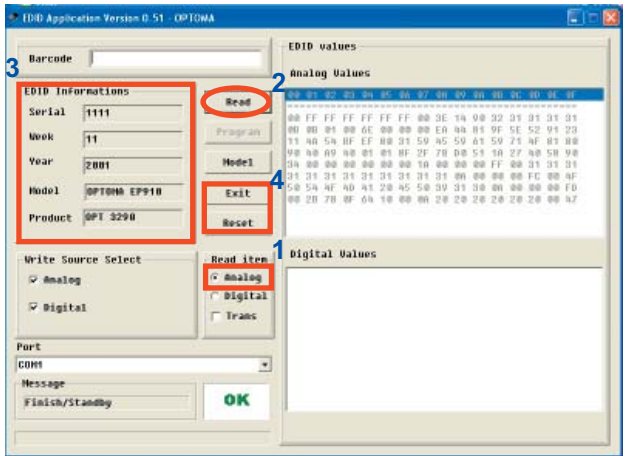
6-2 Setup Procedure

No	Step	Procedure	Photo
1	Connect all ports	<p>1. Connect P1 of Fixture with Com Port of PC/Laptop by RS232 Cable.</p> <p>2. Connect P2 of Fixture with VGA port of EP910 by VGA Cable.</p> <p>3. Connect P3 of the fixture by DVI Cable.</p> <p>4. Plug Power Adapter to Fixture and Power Cord.</p> <p>5. Plug power cord to EP910 unit.</p> <p>Note: Confirm JP3 is "Close" status.</p>	 <p>The top photograph shows the back of the EP910 unit. It has several ports labeled: JP3 (a small connector), P1 (a serial port), P2 (a VGA port), and PowerAdapter (a power input). A red box highlights the P2 port, and a red arrow points to it from the label 'P2'. Another red box highlights the PowerAdapter port, and a red arrow points to it from the label 'PowerAdapter'. A third red box highlights the JP3 port, and a red arrow points to it from the label 'JP3'. The bottom photograph shows the front of the EP910 unit. It has a VGA port on the right side, which is circled in red. A red arrow points to this port from the label 'VGA port'.</p>

6-3 EDID Key-In Procedure

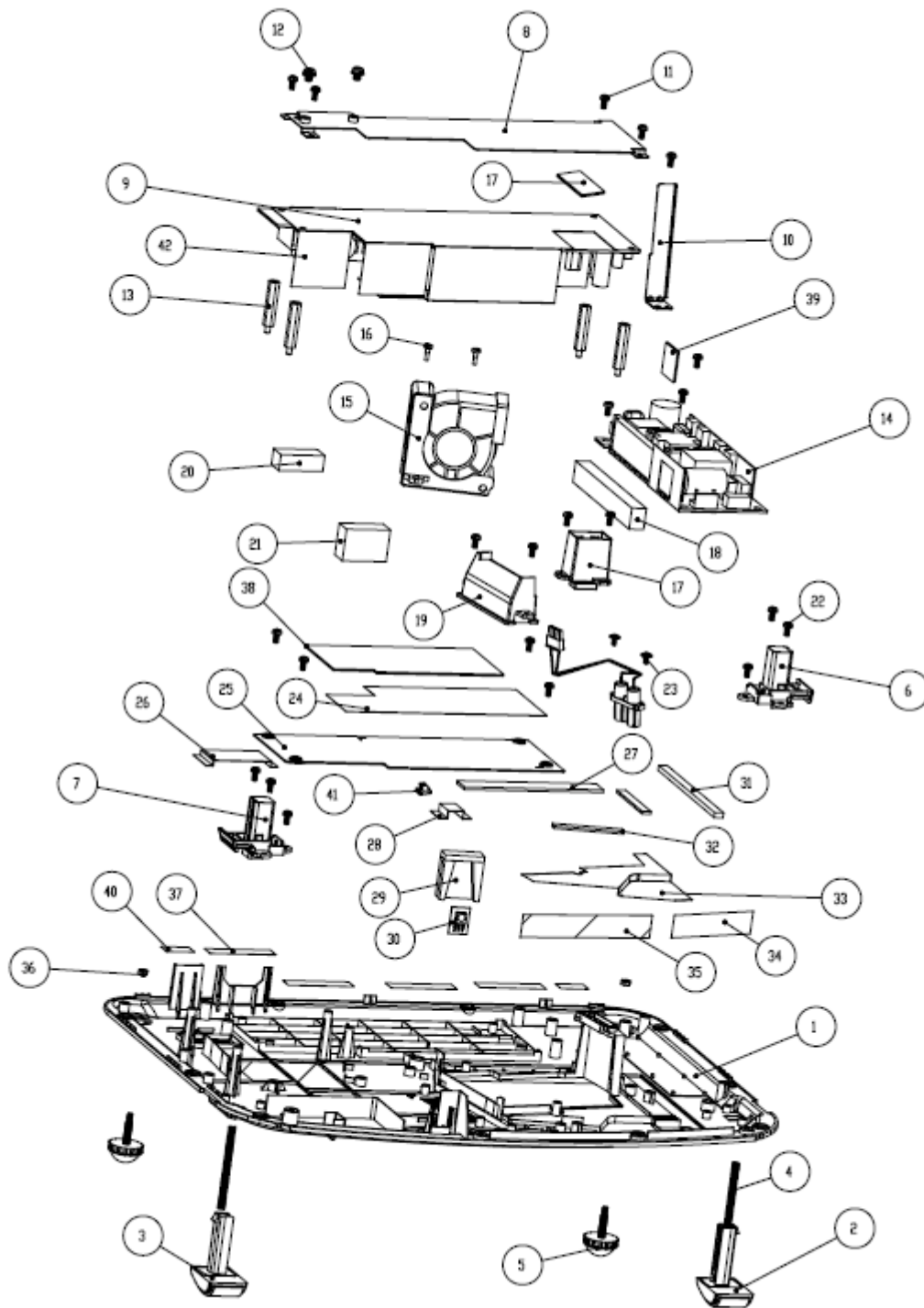
No	Step	Procedure	Photo
1	Execute EDID Program.	Click on “EDID.exe” to execute EDID Program.	
2	Process	<ol style="list-style-type: none"> 1. Check the Com port. 2. Click the “Model” item. 3. Choose the source file “EP910-EDID- A02.ini” and then open it. 	
3	Process	<ol style="list-style-type: none"> 1. Key in the Serial Number into the Barcode blank space. 2. Click “Program” button. 	

No	Step	Procedure	Photo
4	Process	<p>1. "Please change the cable to Analog" will be shown on the screen.</p> <p>2. Please press "Ok" button.</p>	
5	Process	<p>1. "Please change the cable to Digital" will be shown on the screen.</p> <p>2. Please press "Ok" button.</p>	
6	Finish	When EP910 Digital program is finish, the "Ok" message will appear on the screen.	

No	Step	Procedure	Photo
7	Check	<p>1. Make sure to check “Analog” in Read item.</p> <p>2. Press “Read” button.</p> <p>3. Analog Informations will show the result.</p> <p>4. Change to “Digital” in Read Item, then press “Read” button.</p> <p>5. Digital Informations will show the result.</p> <p>6. If EDID’s information is correct, then to close the EDID program.</p>	 <p>The screenshot shows the 'EDID Application Version 0.51 - OPTOMA' window. On the left, the 'EDID Informations' section displays fields for Serial (1111), Week (11), Year (2001), Model (OPTOMA EP910), and Product (OPT 3290). Below this is the 'Write Source Select' section with 'Analog' and 'Digital' checkboxes, both of which are checked. At the bottom left, there is a 'Port' dropdown set to 'COM1', a 'Message' field with 'Finish/Standby', and an 'OK' button. On the right, the 'EDID values' section is visible, with 'Analog Values' and 'Digital Values' displayed as hexadecimal strings. A red box highlights the 'Read' button in the top right, and another red box highlights the 'Read item' dropdown menu in the bottom right, which currently shows 'Analog' selected. Numbered callouts 1 through 5 point to these specific elements: 1 points to the 'Read item' dropdown, 2 points to the 'Read' button, 3 points to the 'EDID Informations' section, 4 points to the 'Read' button again, and 5 points to the 'Read item' dropdown again.</p>

Appendix A

Exploded Overview- 1

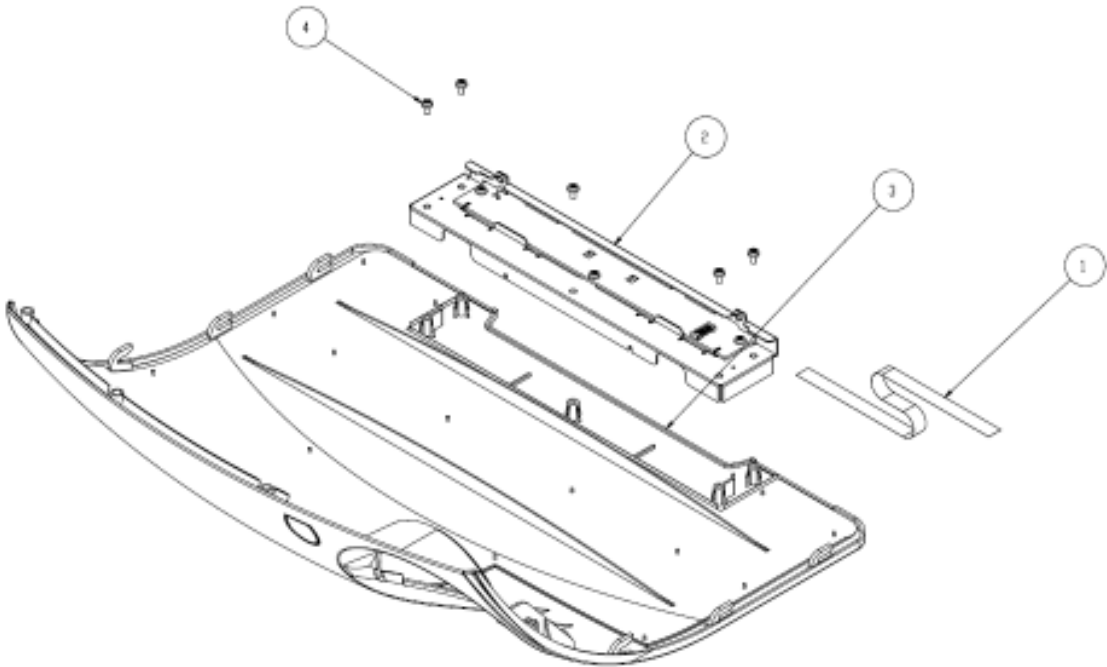


Exploded Parts List- 1

ITEM	PART NO.	REV	DESCRIPTION
1	75.83C02G001	A	BUY ASSY BASE HOUSING EP910
2	70.83C07G001	A	ASSY ELEVATOR FOOT RIGHT MODUL
3	70.83C08G001	A	ASSY ELEVATOR FOOT LEFT MODULE
4	61.83C10G001	A	ELEVATOR SPRONG 0.D:φ4.5 W.D:
5	52.89601G001	A	ADJUST FOOT RUBBER EP910
6	75.83C09G001	A	BUY ASSY PRE-ELEVATOR RIGHT EP
7	75.83C03G001	A	BUY ASSY PRE-ELEVATOR EP910
8	75.82B28G001	A	BUY ASSY BRACKET LVPS HOLDER 5
9	70.83C09G001	A	ASSY LVPS MODULE EP910
10	61.83C13G001	A	BRACKET RIGHT-REAR EMI EP910
11	85.1A123G060	A	SCREW PAN MECH M3*6 NI
12	61.82K16G001	A	SCREW M4 AC GROUNDING
13	61.89532G001	A	HEXSPACER H29 4100MP
14	70.83C06G001	A	ASSY LAMP DRIVER MODULE EP910
15	70.82B04G001	A	ASSY 6025 BLOWER MODULE 5100MP
16	61.87340G001	A	STAND OFF M3*4L D8.0 2100MP
17	52.82B23G001	A	GR-b THERMAL PAD 35*25*2m 5100
18	52.80F02G001	A	SPONGE CR250 100*10*14mm FOR REAR
19	51.83C28G001	A	AIR DUCT FOR CW_ROD PC+ABS EP9
20	41.82B01G001	A	EMI-GASKET-W13-H10_5-L30
21	41.80S02G001	A	EMI GASKET 13*21*30
22	85.WA123G060	A	SCREW PAN TAP M3*6 NI
23	85.TA326G050	A	SCREW CAP TAP M2.6*5 WASHER
24	61.82B41G002	A	BRASS FOIL LVPS BOTTOM 5100MP
25	61.83C17G001	A	AL PLATE FOR LVPS EP910
26	51.83C31G001	A	MYLAR DMD BOTTOM HOLE EP910
27	52.82B06G001	A	AIRTIGHT RUBBER FOR FAN BRACKE
28	51.83C27G001	A	MYLAR LIGHT FR-IR SET HOLE EP9
29	52.83C04G001	A	LIGHTCUT SPONGE FOR FR-IR EP910
30	80.83C04G001	A	PCBA IR SENSOR BD EP910
31	52.83C08G001	A	AIR-TIGHT SPONGE-1 BOTTOM EP910
32	52.83C09G001	A	AIR-TIGHT SPONGE-2 BOTTOM EP910
33	61.83C15G001	A	BOTTOM HEAT ISOLATION AL FOIL EP910
34	41.83C04G001	A	EMI TAPE W15*L60
35	41.83C03G001	A	EMI TAPE W15*L90
36	86.03123G035	A	AIR-TIGHT SPONGE-1 BOTTOM EP910
37	41.83C14G001	A	EMI TAPE W10*L45
38	52.82B25G002	A	PAD ON BASE MODULE FUJIPOLY GR
39	52.83C16G001	A	GR-b(Fujipoly Sarcon)/20*20*3 mm
40	41.83C13G001	A	EMI TAPE W10*L20
41	51.80S36G001	A	WIRE SADDLE WCL-4 'KANG-YANG',
42	51.82B56G001	A	MYLAR INSULATION FOR LVPS 5100

Note: Please check RSPL for updated part number.

Exploded Overview- 2

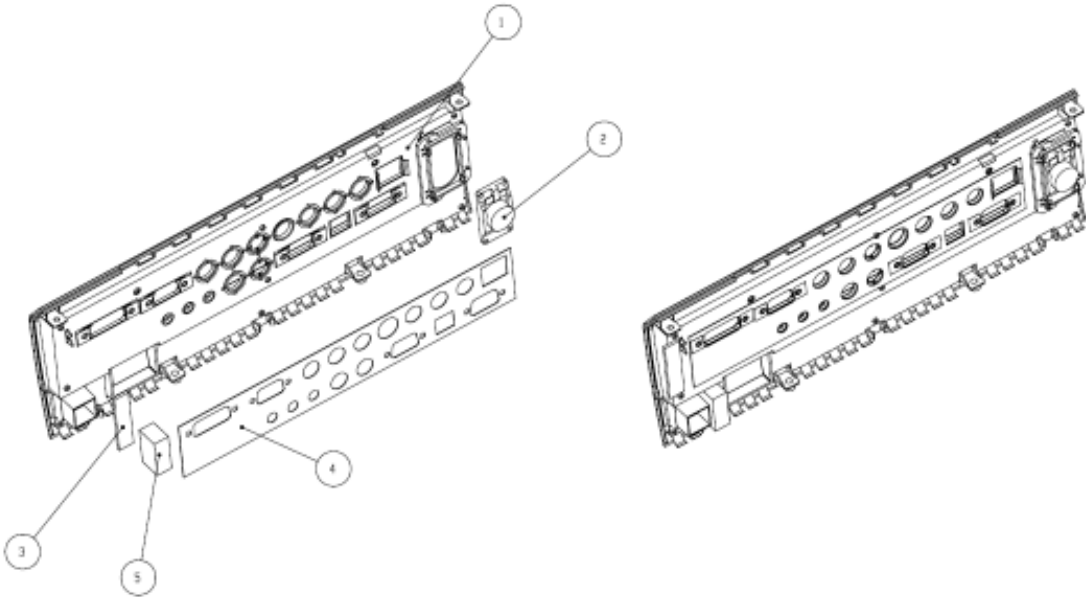


Exploded Parts List- 2

ITEM	PART NO.	REV	DESCRIPTION
1	42.83C06G001	D1	CABLE FPC 16P 200mm KEYPAD TO
2	70.83C14G001	D2	ASSY KEYPAD MODULE EP910
3	75.83C06G001	D1	BUY ASSY TOP COVER EP910
4	85.WA123G050	D1	Screw Pan Tap M3x5

Note: Please check RSPL for updated part number.

Exploded Overview- 3

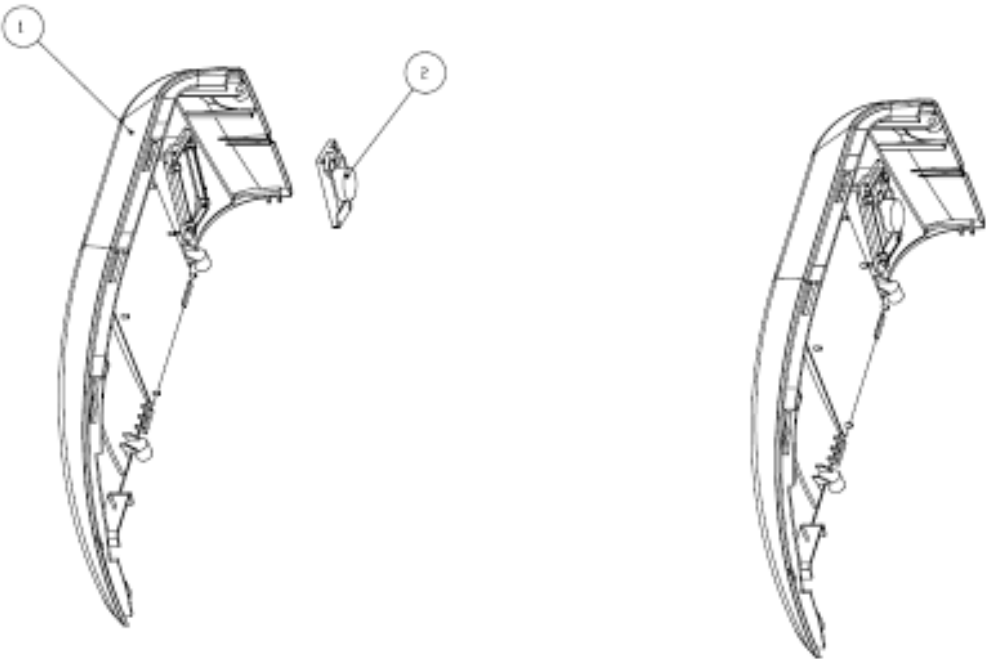


Exploded Parts List- 3

ITEM	PART NO.	REV	DESCRIPTION
1	75.83C05G001	A	BUY ASSY REAR COVER EP910
2	49.83C01G001	A	SPEAKER 3W4ΩHM L130mm REAR COV
3	41.83C06G001	A	EMI GASKET W10*H2*L40
4	41.83C05G001	A	I/O GASKET EP910
5	41.83C07G001	A	EMI GASKET W10*H15*L25

Note: Please check RSPL for updated part number.

Exploded Overview- 4

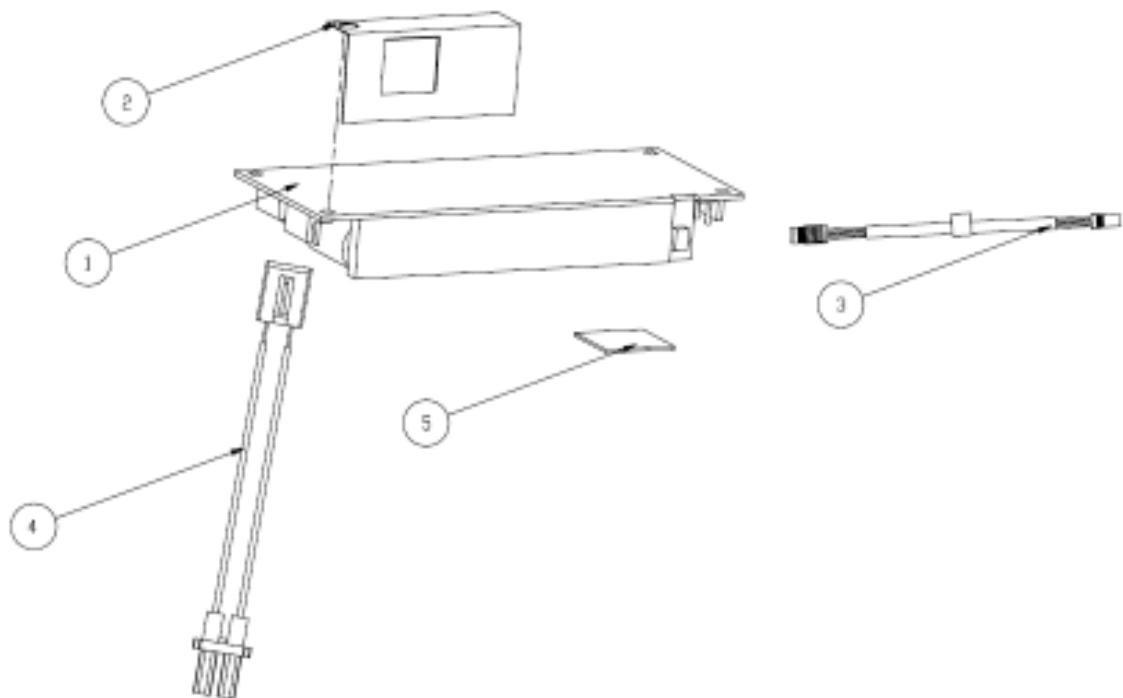


Exploded Parts List- 4

ITEM	PART NO.	REV	DESCRIPTION
1	75.83C07G001	A	BUY ASSY LEFT COVER EP910
2	49.83C02G001	A	SPEAKER 3W4ΩHM L260mm SIDE COV

Note: Please check RSPL for updated part number.

Exploded Overview- 5

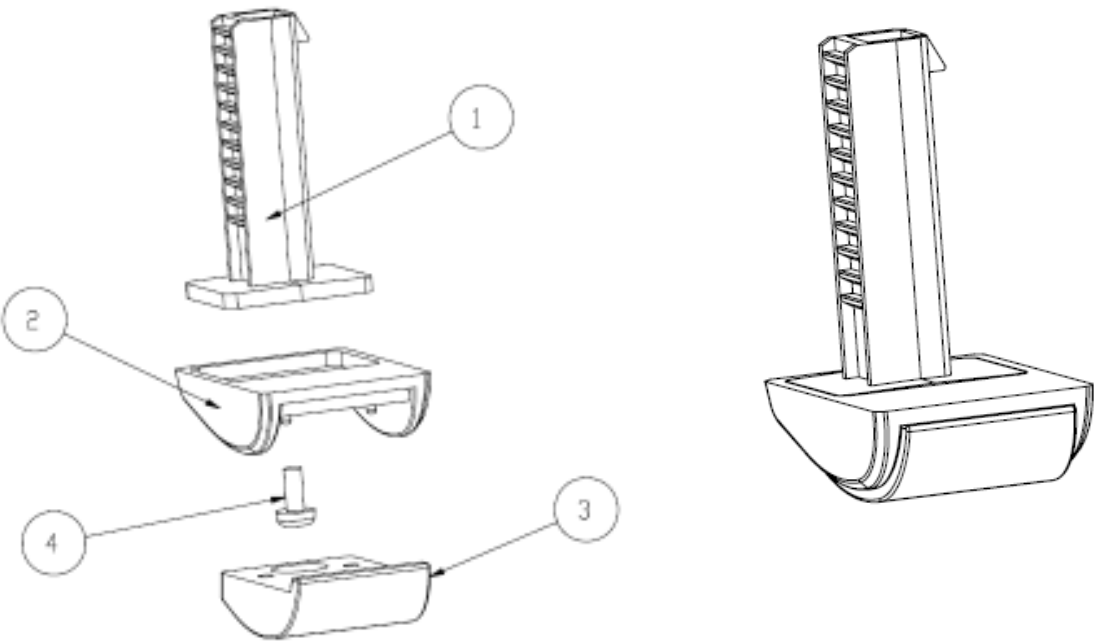


Exploded Parts List- 5

ITEM	PART NO.	REV	DESCRIPTION
1	75.82B03G001	B	ASSY PHILIPS LAMPDRIVER 300W
2	51.83C20G002	A	MYLAR LAMP DRIVER
3	42.82B08G001	A	W.A. 5P #28 70mm LAMP DRIVER
4	76.83C01G001	A	OUTSIDE W.A. 220mm JST-VHR-4N
5	52.83C13G001	A	AIR-TIGHT SPONGE-4 AIRDUCT EP910

Note: Please check RSPL for updated part number.

Exploded Overview- 6



Exploded Parts List- 6

ITEM	PART NO.	REV	DESCRIPTION
1	51.83C16G001	A	ELEVATOR BODY
2	51.83C21G001	A	ELEVATOR FOOT
3	52.83C03G001	A	ELEVATOR FOOT RUBBER
4	85.1F123G060	A	SCREW PAN MECH W/SF M3*6 Ni GR

Note: Please check RSPL for updated part number.

Appendix B

Serial Number System Definition

Serial Number for Projector

A BBB Y VVV C D BEMO EEEE
(1) (2) (3) (4) (5) (6) (7) (8)

- (1) : O = Optoma
- (2) : Product Code (ex: 83C= EP910 Series)
- (3) : Y = Last Number of the Year (ex: 2002 - 2, 2003 - 3)
- (4) : Week of Year
- (5) : Panel Vendor Code (T for TI)
- (6) : Electrical Classification (1=110V, 2=220V, 0=Universal)
- (7) : B = BIOS Version, E = PCB Board Version,
M = Mechanical Version, L = Location of Manufacture
- (8) : Serial Code (from 0001~)

II. PCBA Code Definition

PCBA Code for Projector

A B XXXXXXXXXXXX C XXX EEEE
① ② ③ ④ ⑤ ⑥

- ① : ID ————— C: M/B
B: DMD/ B
- ② : Vendor Code
- ③ : P/N
- ④ : Revision
- ⑤ : Date Code
- ⑥ : S/N